MES COLLEGE OF ENGINEERING, KUTTIPPURAM
DEPARTMENT OF COMPUTER APPLICATIONS 20MCA245
– MINI PROJECT

## PRO FORMA FOR THE APPROVAL OF THE THIRD SEMESTER MINI PROJECT

*(Note: All entries of the pro forma for approval should be filled up with appropriate and complete information. Incomplete Pro forma of approval in any respect will be rejected.)*

| | |
|---|---|
| Mini Project Proposal No : ___1_____ *(Filled by the Department)* | Academic Year : 2020-2022<br>Year of Admission : 2020 |

1. Title of the Project : Detection of Impersonation In Online Examinations
2. Name of the Guide : Balachandran K P
3. Number of the Student: 01
4. Student Details (in BLOCK LETTERS)

| Name | Roll Number | Signature |
|---|---|---|
| 1. ANJANA M S | 09 | |

Date:1/12/2021

**Approval Status :** Approved / Not Approved

Signature of Committee Members

**Comments of The Mini Project Guide** Dated Signature

Initial Submission :

First Review :

Second Review :

**Comments of The Project Coordinator** Dated Signature

Initial Submission:

First Review

Second Review Comments : Dated Signature of HOD

# Detection of Impersonation In Online Examinations

ANJANA MS

---

**Introduction:**

We are living in the era where office work is becoming work from home and examinations are becoming online examinations. In online examinations there is a lot of chance of impersonation. This project proposes a method to overcome the downside of online examinations which is impersonation. This approach aims in increasing the credibility of online exams and the exams can be taken from any convenient location. In recent days, the candidate appearing for an online examination is authenticated by carrying out manual verification of the candidate's credentials by the examiner. Conducting an automated face authentication will check the identity of the user when starting the exam. For this type of authentication, we use facial recognition system which uses the Viola-Jones.

**Objectives:**

The system first requires registration of the candidate before the examination. On the beginning of the examination , the system takes your face and validates it and on verification, the candidate will be taken to the examination portal , he or she can download question paper and upload the answer scripts. The user's face will be captured and stored in the database so that impersonation won't happen. Impersonation is a significant problem in online examinations. An efficient invigilation mechanism is the need of the hour to ensure the standard of examination and to maintain the authentic conduct of the examination. Hence, we propose dynamic face authentication using the Viola-Jones algorithm and SVM to check the integrity of the candidate in the beginning of the examination. After downloading question paper ,student can upload answer scripts

**Existing system**

At present the examination system is majorly manual. The candidate appearing for the online examination is authenticated by manual verification of their credentials by the examiner. The system does not perform any check on or before taking an examination. This lack of presence of an auto proctored examination has led to a rise of collusion(impersonation).

**Proposed system**

I aiming to conduct a fully automated examination system where the user can take the exam from anywhere and the authenticity of the candidate. The assessment is auto proctored and so there is no need for an examiner. The user's face is verified to check is identity before beginning of the examination.

**Basic functionalities:**
**Modules**

**1.Admin**

- Login
- Student registration
- Adding subjects
- Exam scheduling
- Adding questions and answers
- Adding study materials

**2.Student**

- Login
- View study materials
- View exam notifications
- Attend exams

.

**Face recognition algorithm**

Dlib and opencv packages in python is used for the face recognition algorithm and for image processing. After identifying the face next step is feature extraction. HOG features are extracted from the image and then start comparing with the image in the database to identify whether he/she is a valid user or not. If it matches up to 60% to70% he/she is a registered user. If it is not satisfying the threshold value he/she is an invalid user.

**Identity Verification**

The identity of the candidate is verified by the face authentication system. The identity verification is done at the beginning of examination to check if no impersonation has happened. This face authentication system uses face recognition algorithm to locate or identify a face and SVM algorithm to classify the faces in the database.

**IMPLEMENTATION**

The project is been executed to accomplish the results by three modules namely:

- Face authentication
- Online examination portal

### A. Face Authentication

We use image processing toolbox to perform the face authentication. Just like any other form of biometric identification, face recognition requires samples to be collected, identified, extracted with necessary (features) information, and stored for recognition. The algorithm that is used for face recognition is Viola Jones algorithm and SVM (Support Vector Machine).

### B. Online Examination Portal

After face authentication, the candidate is provided with the examination on portal where he/she can download the question paper and upload their answer scripts.

**Developing Environment**.

- OPERATING SYSTEM: WINDOWS 10 AND ABOVE
- FRONT END: HTML, CSS, JAVASCRIPT
- BACK END: Mysql
- SOFTWARES USED: Jetbrains , Pycharm, Android Studio
- TECHNOLOGY USED: PYTHON,JAVA
- FRAME WORK USED: Flask